

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of acquisition of satellite data by a mobile device including ~~a radio navigation satellite system (RNSS) satellite radio navigation-receiver~~, said method ~~including the following steps comprising:~~

-said receiver receiving a signal transmitted by a plurality of satellites and corresponding to a sum of signals each transmitted by a satellite and each modulated by a spread spectrum signal characteristic of said satellite,

-said receiver generating a plurality of local duplicates each of which is the duplicate of a spread spectrum signal characteristic of a satellite,

-correcting ~~the a~~ frequency of each of said local duplicates by compensating ~~the a~~ Doppler effect of each of said satellites using assistance data sent by an assistance server to said mobile device, ~~and applying a first correlation function to each of the corrected duplicates,~~

~~-summing said plurality of the corrected duplicates to which the first correlation function is applied to generate a sum of the corrected duplicates, and~~

~~-determining the a second correlation function as a function of time between the sum of said plurality of corrected duplicates the sum of the corrected duplicates and said satellite data signal.~~

2. (currently amended): A method according to claim 1, including identifying each of the satellites associated with each of ~~the~~ correlation peaks revealed by said second correlation function.

3. (currently amended): A method according to claim 2, wherein ~~in the identification of at least one identifying each of the satellite satellites includes the following steps, identifying at least one of the satellites comprises :~~

-identifying ~~the a~~ synchronization time associated with a correlation peak,

-determining a plurality of correlations calculated for said synchronization time between each of said the sum of the corrected duplicates and said satellite data signal, and

-identifying the at least one of the satellite satellites associated with said correlation peak as a function of said correlations.

4. (currently amended): A method according to claim 3, wherein said peak is a main highest peak among the correlation peaks of said second correlation function as a function of time, and the highest peak is first identified among the correlation peaks.

5. (currently amended): A method according to claim 3, wherein, after the at least one satellite has been identified, each of the remaining satellites-satellite is identified, using assistance data sent to said mobile device from an assistance server, said assistance data including the ephemerides of said plurality of satellites and the-an identifier of the-a cell in which said mobile device is located, by determining the-a propagation time difference of a signal between said the at least one satellites-satellite already identified and said mobile terminal, on the one hand, and each of the remaining satellites to be identified and said mobile device, on the other hand.

6. (currently amended): A method according to claim 2, wherein the identifying each of said the satellites-is identified by the following steps comprises:

-identifying the-a synchronization time associated with a correlation peak,

-determining a plurality of correlations calculated for said synchronization time between each of said the sum of the corrected duplicates and said satellite data signal, and

-identifying the-a satellite associated with said correlation peak as a function of said correlations.

7. (currently amended): A method according to claim 1, wherein said correlation function as a function of time is determined by the following steps:

determining the Fourier transform of each of said corrected duplicates,

-summing said Fourier transforms of each of said corrected duplicates,
-determining the Fourier transform of said satellite data signal,
-multiplying each sum of said Fourier transforms by the Fourier transform of said satellite data signal, and
-determining the inverse Fourier transform of the product obtained by the preceding step wherein the first correlation function corresponds to a Fourier transform, and the second correlation function corresponds to an inverse Fourier transform.

8. (currently amended): An A a radio navigation satellite system (RNSS) satellite navigation-receiver for implementing the method according to claim 1, said receiver being adapted to receive a signal transmitted by a plurality of satellites and corresponding to a sum of signals each transmitted by a satellite and each modulated by a spread spectrum signal characteristic of said satellite, and said receiver including comprising:

-means for generating a plurality of local duplicates each of which is the duplicate of a spread spectrum signal characteristic of a satellite,
-means for correcting the-a frequency of each of said local duplicates by compensating the-a Doppler effect of each of said satellites using assistance data sent by an assistance server to said receiver, and applying a first correlation function to each of the corrected duplicates,
-an adder adapted to sum said the corrected duplicates to which the first correlation function is applied to generate a sum of the corrected duplicates, and
-means for calculating the-a second correlation function as a function of time between each sum of said the sum of the corrected duplicates and said satellite data signal.

9. (currently amended): A mobile device incorporating an-a radio navigation satellite system (RNSS) satellite navigation receiver according to claim 8.